Science
Conference

Vol.4 N.1 (2026)
science-conference.com

COPYRIGHT AND ARTIFICIAL INTELLIGENCE: LEGAL ISSUES AND REGULATORY RESPONSES IN THE ERA OF GENERATIVE TECHNOLOGIES

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ABSTRACT

The rapid advancement of generative artificial intelligence (AI) has challenged traditional copyright frameworks, which are fundamentally based on human authorship. AI systems can autonomously produce literary, artistic, and musical works, raising complex questions regarding originality, authorship, and legal protection. Current Uzbek copyright law and international treaties, such as the Berne Convention and TRIPS Agreement, do not explicitly address AI-generated content, creating uncertainty over ownership and rights allocation. This study employs doctrinal and comparative legal analysis to examine the eligibility of AI-generated works for copyright protection, highlighting that fully autonomous AI creations generally fall outside legal protection, while works produced with meaningful human input may qualify. The research advocates a "human-in-the-loop" approach, granting protection where human creativity is significant and suggesting alternative legal mechanisms for purely AI-generated works. For Uzbekistan, legislative clarification is essential to define authorship standards, ownership rules, and the use of copyrighted materials in AI training, while international harmonization is necessary to ensure coherent global governance.

KEYWORDS

Artificial Intelligence (AI), Generative Technologies, Copyright Law, Authorship, Originality, Human-in-the-loop, Intellectual Property, Legal Protection, AI-Generated Works

INTRODUCTION

Advanced AI systems, including large language models, text-to-image generators, and music composition algorithms, are now capable of autonomously producing literary texts, visual artworks, software code, and musical compositions that closely resemble — and in some cases are virtually indistinguishable from — works created by human authors. This technological progress challenges long-standing legal assumptions about creativity, originality, and authorship.

Historically, copyright law has been constructed upon anthropocentric principles, meaning that it presumes the existence of a human author as a necessary condition for legal protection. Core copyright concepts such as originality, moral rights, and creative intent are deeply rooted in the idea of human intellectual effort. Consequently, when works are generated by AI systems operating with varying degrees of autonomy, fundamental questions arise regarding whether such outputs meet the traditional criteria for protection and whether they can fit within existing legal categories.

The Law of the Republic of Uzbekistan “On Copyright and Related Rights” (2006) does not expressly address the legal status of works generated by artificial intelligence. The absence of explicit provisions regulating AI-created content gives rise to significant legal uncertainty, particularly concerning the determination of authorship, the allocation of economic rights, the applicability of moral rights, and the standards of originality[1]. This regulatory gap may hinder legal predictability for developers, users, investors, and creators who rely on AI technologies in creative industries.

Comparable challenges are observable within international copyright frameworks. Foundational instruments such as the Berne Convention for the Protection of Literary and Artistic Works and the TRIPS Agreement were drafted in an era when autonomous machine creativity was not technologically conceivable[2]. These instruments implicitly assume human authorship and do not provide guidance on the legal status of AI-generated works. As a result, jurisdictions worldwide are grappling with divergent approaches, ranging from strict denial of protection to more flexible models that attribute authorship to human operators or provide sui generis solutions.

Against this background, the present research seeks to analyze whether AI-generated works can and should qualify for copyright protection under existing doctrinal principles. It further aims to identify potential right holders in such works — whether they be programmers, users, data providers, or other stakeholders — and to evaluate possible models of rights allocation. Finally, the study proposes legislative and doctrinal solutions tailored to the legal system of Uzbekistan, drawing upon comparative international experience in order to ensure both legal certainty and innovation-friendly regulation.

METHODS

This research employs a doctrinal legal research methodology complemented by a comparative legal analysis approach. The doctrinal method serves as the primary framework for examining existing legal norms, principles, and interpretative doctrines governing copyright protection, with particular attention to the concept of authorship and the conditions for legal protection. The study relies on a systematic analysis of national legislation, international legal instruments, judicial practice, and academic scholarship.

The normative basis of the research includes the Law of the Republic of Uzbekistan “On Copyright and Related Rights” (2006), which constitutes the core domestic legal framework regulating authorship, ownership, and the scope of copyright protection. In addition, the research examines key international treaties, including the Berne Convention for the Protection of Literary and Artistic Works, the TRIPS Agreement, and the WIPO Copyright Treaty, in order to assess the extent to which international standards accommodate or constrain the recognition of AI-generated works[3].

To enrich the analysis, the study also considers judicial practice and administrative decisions from jurisdictions that have actively confronted the issue of AI-generated content, particularly the United States and the European Union. These case studies provide practical insight into how courts and copyright offices interpret authorship requirements and apply originality criteria in situations involving artificial intelligence. Where relevant, reference is made to developments in other jurisdictions that have experimented with alternative or sui generis regulatory approaches.

The analytical focus centers on the statutory interpretation of authorship requirements, ownership allocation rules, and eligibility criteria for copyright protection, with special emphasis on the role of human creative input. Through comparative evaluation, the research identifies both converging legal patterns and divergent regulatory strategies across different legal systems. Finally, a normative analysis is undertaken to formulate reasoned recommendations for adapting Uzbekistan's copyright framework to the realities of generative AI technologies, aiming to balance innovation, legal certainty, and the protection of creative interests.

RESULTS

The research findings indicate that existing copyright regimes, including the legislation of the Republic of Uzbekistan, are built upon an implicit yet fundamental requirement of human authorship. Copyright law traditionally recognizes only natural persons as authors, linking protection to human intellectual effort, creative intent, and personal expression. Since artificial intelligence systems do not possess legal personality and cannot be classified as natural persons, they are incapable of qualifying as authors under the current legal framework. As a result, works generated entirely autonomously by AI, without meaningful human creative input, are unlikely to meet the authorship criteria and therefore may fall outside the scope of copyright protection, potentially entering the public domain.

At the same time, the study demonstrates that not all AI-assisted creations should be treated identically. Where a human exercises substantial creative control over the process — for example, by selecting, arranging, modifying, or meaningfully directing the output generated by AI — such works may satisfy the originality requirement. In these circumstances, AI functions as a technological tool rather than an independent creator, and copyright ownership is generally attributed to the individual who made the creative decisions. However, one of the most complex legal issues remains the determination of what constitutes "sufficient human creativity." The absence of clear statutory criteria creates uncertainty in distinguishing between mere technical input and genuine creative authorship.

Comparative analysis confirms that the human-authorship principle is widely upheld across jurisdictions. In the United States, courts and the U.S. Copyright Office have consistently denied copyright protection to works produced by fully autonomous AI systems, emphasizing that human authorship is a constitutional and statutory prerequisite[4]. Similarly, within the European Union and other legal systems, the concept of originality is closely tied to the expression of the author's own intellectual creation, reinforcing the centrality of human involvement. International treaties, including the Berne Convention and the TRIPS Agreement, do not expressly address AI-generated works, thereby leaving significant discretion to national legislators in regulating this emerging issue.

Furthermore, the findings highlight that contractual arrangements between AI service providers and users may allocate economic interests and define ownership of outputs at the private law level. Nevertheless, such contractual provisions cannot create copyright protection where statutory requirements are not fulfilled. In other words, agreements may govern rights between parties, but they cannot substitute for the legal recognition of authorship under copyright law. This distinction underscores the importance of legislative clarity in addressing the status of AI-generated works.

DISCUSSION

The study underscores a profound structural tension between classical copyright doctrine and the realities of AI-driven creative production. Traditional copyright theory is rooted in philosophical justifications such as natural rights theory, which links authorship to personal intellectual labor; utilitarian theory, which views copyright as an incentive mechanism to stimulate human creativity; and personality theory, which connects creative works to the moral and personal expression of the author. All of these conceptual foundations presuppose human agency as the central element of creative activity. The emergence of AI systems capable of autonomously generating text, images, music, and other expressive outputs disrupts this paradigm by introducing non-human processes that can nonetheless produce content of significant economic and cultural value.

Adhering strictly to the requirement of human authorship safeguards the internal coherence and theoretical integrity of copyright law. It maintains continuity with

established doctrines of originality, moral rights, and creative intent. However, such rigidity may lead to practical consequences: a growing body of commercially valuable and socially impactful AI-generated content could remain outside the scope of protection, potentially reducing legal certainty and investment incentives in AI-driven creative industries[5].

On the other hand, formally recognizing AI systems as legal authors would necessitate substantial doctrinal transformation. It would raise complex questions regarding legal personality, ownership, liability, moral rights, and enforcement. Granting authorship status to non-human entities could weaken the anthropocentric structure of copyright law and create conceptual inconsistencies within broader civil law systems. Therefore, this option appears both theoretically controversial and practically problematic.

A more balanced and pragmatic solution lies in adopting a "human-in-the-loop" approach. Under this model, copyright protection would be granted where a human exercises meaningful creative control over the AI-generated output. The decisive factor would not be the mere use of AI technology, but the presence of genuine intellectual contribution reflected in creative choices, selection, arrangement, or modification of the output. In contrast, for works generated entirely autonomously by AI without substantial human involvement, alternative regulatory mechanisms could be explored. These might include sui generis protection regimes, limited neighboring rights, or other forms of related rights designed to protect economic investments without redefining authorship.

In the context of Uzbekistan, legislative clarification is essential to ensure predictability and legal certainty. Amendments to the Law "On Copyright and Related Rights" could explicitly define the status of AI-assisted works, establish criteria for determining sufficient human creativity, and clarify ownership rules among developers, users, and other stakeholders. Additionally, the regulation of copyrighted materials used in AI training processes should be addressed to balance innovation with the protection of existing rights holders[6]. Given the transnational nature of digital technologies, international cooperation and harmonization efforts will be crucial to avoid fragmentation and ensure coherent global governance in the field of AI and copyright law.

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